

## **THE EFFECT OF POWER-POINT COMPUTER PROGRAM ON READING COMPREHENSION ON IRANIAN SENIOR HIGH SCHOOL THIRD GRADE STUDENTS**

**FATEMEH ALIPANAHI**

Assistant Professor, Department of English Language, Zanjan Branch, Islamic Azad University, Zanjan, Iran

### **ABSTRACT**

This study is based on the Computer-Assisted Language Learning (CALL) by Paul Gruba, aimed at investigating the effect of Power-Point Computer Program on reading comprehension on Iranian senior high school in third grade students. The current Study was carried out, by using Power-Point Computer Program in instruction of passages of the third grade text book materials in senior high school as an experimental group who was instructed by using CD, Video, and computer through the power-point of textbook materials. The main purpose of the study is to determine how much the power-point computer program can promote the level of the knowledge of vocabulary and reading comprehension. The interpretation of obtained scores in Pre/Post Tests indicate that the significant effect of Power-Point Computer Program in developing reading comprehension and vocabulary knowledge among Iranian senior high school in the third grade students.

**KEYWORDS:** CALL, Reading Comprehension, Power, Point Computer Program

### **INTRODUCTION**

The combination of text, audio, and video "makes multimedia an excellent format for learning materials and has led to the birth of an industry in computer-assisted language learning (CALL)" (Ayres. 2002. p256). Computer-Assisted Language Learning (CALL) methodology can be defined as "The search for and study of application of the computer in language learning and teaching" (Levy, 1997, p.1). It should be considered that using of Digital Technology (DT) in the process of Language learning and simultaneously, growing international relationship in various aspects at the corner of overall the world, the need of applying DT, in order to promote the Vocabulary knowledge and reading comprehension in English as foreign language, the ministry of Education in Tehran has taken some measures such as the performing and developing Smart Schools, running Pilot Schools, supporting the voluntary schools, as well as preparing of operational document of Smart Schools.

The major purpose of CALL is focused on helping second language learners to learn efficiently. It seems that researchers and language teachers attempt to make second language learners interested in employing computer to enhance their knowing in different aspects of learning. Learners can use computer in several times whenever it needs, in every time they want, whatever they need to learn in various level of background, and the most important, it can be considered as an important motivation especially for children.

Computer-Based instruction has been challenging traditional teaching and learning (Jonse, 2001). The importance of computer technologies by developing information technology and internet, and the role of computer in education and pedagogical practice will deem crucial and inevitable in the twenty first century. English pedagogy benefits the use computers at each level of instruction.

## REVIEW OF LITERATURE

### Computer-Assisted Language Learning (CALL)

Work in CALL began as early as the 1960s when the idea of using a computer for language instruction developed. Still, by, 1980, in a survey of 1810 foreign language department in America published in Modern Language journal, of the 602 who responded only 62 made of CALL systems: CALL was evaluated as prospective, but hardly useful for mass instruction purposes because of the cost (Olsen,1980).

With the introduction of microchip technology, and then the invention of the internet, things changed dramatically. Computers became cheaper, smaller, and more powerful, and as a result, their role in education has grown immensely. BY the beginning of the 1990s, a survey conducted in elementary through university education instructions in the United States indicated that almost every student has access to a computer (Ely, 1995). Another study reported that a majority of collage and universities across Canada were using CALL (kidd, i997), while in the USA, more that 40 states provides educators with some sort of internet access, with at least 20 percent of public school teachers reporting using computer for teaching or curriculum design (Harris,1998).

### Advantages and Disadvantages of CALL

The greatest benefit of CALL is the fact that it is largely oriented to the individual learner: a computer program delivers exactly the material a learner needs and the process of learning can go at the learner's pace. If necessary, a computer program can be used for mere drilling to get language skills automated by providing a variety of structured exercises on the grammatical or lexical program. A computer can be used at home, and a student can spend as much time as he or she needs to master a language skill. In a classroom setting, CALL can significantly enlarge the class capacity without increasing teaching staff.

CALL is still far from being used widely due to a number of problems, particularly with regarded to different computer operational system, such as lack of good software and incompatibility of a Mac program with Windows or Linux. At present, CALL is only a helpful auxiliary technique in learning the target language. Danny D. Steinberg & Natalin V. Scirini, 2006, (p.157.158).

Overall, the main object of CALL is to "improve the learning capacity of those who are being taught a language through computerized means" (Cameron, 1999a, p.2). Note that such a definition focuses particularly on language learning, not language teaching, while at the same time the use of computer forces reconsideration of traditional stakeholder roles: learners, teachers, and researchers have each had to adapt to the demands and opportunities afforded by a range of new technologies. With the advent of network computers and the internet, in particular, learners are increasingly called upon to design and execute their own computer-based activities.

The growing availability of internet access has prompted CALL instructors to move away from stand-alone workstation and more toward networked computers.... Alan Davies & Catherine Elder (2006), (p. 623, 624)

### Statement of the Problem

Using Digital Technology such as computer, video, video projector, CD, etc, have their own barriers and issues that only very couragious and motivated language teachers undertake to do it. The challenges are a lot, as follows:

- Insufficient technology supporter like low speed internet, sometimes lack of accessing the internet everywhere, or even computer, video, CD.
- Insufficient allocated budget in order to purchase and equip DT or to support the DT especially in public schools.
- Inadequate infrastructure, the basic system and structure of DT for using language teaching and learning is not enough and needs to be supported in different aspects to do well.
- Inadequate of teacher training, it needs to be said the majority of language teachers in public schools do not get adequate knowledge and experience as well as lack of motivation in order to use DT in their instructions.
- Resistance of different stakeholders, obviously, most of language teachers do not have enough willingness to change their traditional procedures in their instructions.
- Inappropriate and inadequate physical environment of the classroom, the number of students, and lack of facilities to use DT in the classroom.
- It is difficult to manage the class while using DT to take attention and make the students interested in using DT in learning.
- Incompatible of the content of the textbooks used in the framework of DT.
- Lack of specific and integrated curriculum of DT in language learning and teaching.
- It seems that cultural, moral, religious conflicts are the most crucial factors affecting the language teaching and learning.

### **Significance of the Study**

The current study tries to indicate the impact of Power-Point Computer Program on developing and reading comprehension and vocabulary of English as foreign Language among Iranian senior high school in the third grade students. The researcher expects that using computer in teaching and learning of reading comprehension and vocabulary is of paramount importance.

### **Hypothesis**

How much can the power-point computer program promote the level of the knowledge of vocabulary and reading comprehension on Iranian senior high school in third grade students?

### **METHODOLOGY**

This part of the paper involves the information about the subjects who participated in the research, the instruments used in teaching and learning of the third –grade English textbook on Iranian senior high school students. The procedures applied in the instruction, and the instrument used to collect data required in this research.

### **Subjects**

The participants, fifty of third grade male students of senior high school, were randomly selected from Aboureyhan High school in district 2 in Tehran. The subjects were divided into two groups, one as experimental group,

and the other as control group. The former one was taught through the power-point computer program of the textbook materials, the latter group was taught in traditional procedures.

### Procedures

In order to carry out the study, the following procedure was followed. This study was conducted for a period of just three months (12 weeks) in an environment where students received English for two 80-minute classes each week. The experimental and control groups were formed to test the effectiveness of the Power-Point Computer Program on developing and reading comprehension and vocabulary knowledge of English as a foreign Language among Iranian senior high school in third grade students.

### Instrument

As data collection tools, the pretest and posttest, the individual's scores were used to be analyzed

- The control group was instructed in traditional procedures by using textbook.
- The experimental group was taught by using prepared-power point materials based on the textbook, pedagogical CD, video, and computer.

### RESULTS

In almost any study, one of the most common ways of statistical analysis can be descriptive statistics. It is the basis of interpretative investigation and a reliable index in any research that can be obtained through the pretest and posttest. The aim of this research is to evaluate the students' reading comprehension and vocabulary knowledge affected by CALL.

This study concerns with improvement in English measured by achievement tests of the participants. It is appropriate to use the statistical analysis to be compared.

This paper is based on the specification of the perception of the text materials including: comprehension, identification of vocabulary, spelling, pronunciation, word formation, etc.

The table 1 shows that the experimental group posttest mean score improved at 2.24. The result of the table indicates that the experimental group had better performance than the control group because the control posttest mean score improved at 1.

Table 1

		Paired Differences					t	df	Sig. (2-Tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	VAR00005 - VAR00006	-1.00000	1.44338	.28868	-1.59580	-.40420	-3.464	24	.002
Pair 2	VAR00005 - VAR00006	-2.24000	.95873	.19175	-2.63575	-1.84425	-11.682	24	.000

**Table 2: Pearson Paired Sample Correlation for Pretest and Posttest**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	VAR00005	13.7200	25	2.86531	.57306
	VAR00006	14.7200	25	2.66958	.53392
Pair 2	VAR00010	13.8400	25	3.07449	.61490
	VAR00011	16.0800	25	2.43105	.48621

As shown in the table 2 the mean score of the experimental group was 13.84 and the control group mean was 13.72 in pretest. There was slightly significant improvement in the result of the mean score of the experimental posttest, 16.08. The mean score of control group in posttest was 14.72.

**Table 3: Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	VAR00005&VAR00006	25	.866	.000
Pair 2	VAR00010&VAR00011	25	.966	.000

The table 3 represents that the Pearson Correlation between both groups A, B achievement is 0.866, 0.966 respectively, almost near a perfect correlation all the students improved and did so quite consistently. The significant value is, .000. Therefore, we can conclude that there is a significant difference in the Fear of statistics Test score at Time one and at Time two.

As the result of teaching as any teacher desire, all groups improved in their learning. A survey of the Tables revealed that there was a significant improvement for experimental group students compared to control group students to each of posttests. This indicates that CALL learning activities in the EFL context provided a better environment where the students could get more exposure to reading comprehension and vocabulary knowledge.

## DISCUSSIONS

With the rapid development of technology, a number of language teachers believe that second language learners can benefit from employing computers in language classes. For instance, Celce-Murcia (1991) acknowledges that language learning experiences with computer have significant differences with those in traditional language classes. She attributes the difference to the nature of the interaction between the learners with computer brings about a more learner-centered approach. Many researchers and language teachers have made endeavor to familiarize students with computers in order to help them improve their pronunciation, reading skills, grammar knowledge or other language components.

An example is the work done by Wood (2001) who tried to enhance vocabulary instruction via computer. Writing has also been paid attention to by some researchers and from different programs made for this reason, Wood (2001) introduce "Native English Writing Assistant" as a successful one. However, the analyses of the results of the experimental and control groups revealed that using computers had a significant effect on the reading comprehension achievement level of highschool students and their comprehension achievement level at the end of the period of instruction indicated a significant difference. Although it can be mentioned that students in the experimental group who received higher score had greater ability in their reading skills at the end of the course of instruction, It should be mentioned here that since the two groups were not homogenous and were randomly assigned to the control and experimental groups, the result might have been affected by other factors and procedures.

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